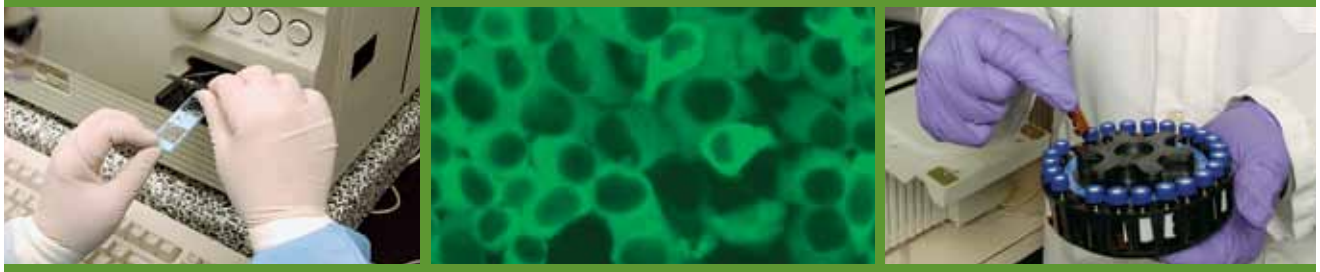


Pharmacology Services



RTI International offers established capabilities in *in vitro* molecular pharmacology in support of target development and cell-based assay design, development, and validation, with a focus on the central nervous system. We also perform cell-based assays in support of drug discovery screening programs and hit-to-lead characterization. In addition, we have the molecular biology expertise to enable cDNA cloning, mutagenesis, and expression of targets of interest in heterologous and homologous systems.

Capabilities

Our standard pharmacology laboratory capabilities allow RTI to develop and run a variety of biochemical and phenotypic bioassays to examine the effect of synthetic compounds, natural product extracts, or compounds isolated from natural products on receptor-ligand interactions or on cell growth and viability. We design, develop, validate, and perform the following types of studies:

- Stable and transient expression of targets of interest in multiple cell-based platforms
- GPCR activation assays using based calcium mobilization assays and [³⁵S]GTPγS binding
- LGIC activation assays using membrane potential (ion flux) assays
- High-throughput receptor internalization assays
- Radioligand binding and competitive binding assays in both tissue and cell lines for a variety of targets, including those associated with abuse liability
- Protein expression and phosphorylation (Western-blot) assays
- Transcription regulation (reporter gene) assays
- Subcellular protein location and translocation assays

Equipment

Our laboratories are equipped with state-of-the-art instruments and tools, including the following:

- Dedicated cell culture facility
- Automated liquid handling (Biomek FX, Multiprobe II)
- FlexStation II³⁸⁴ and FlexStation III fluorescent plate readers
- Discovery 1 automated fluorescent microscope with MetaXpress software
- Topcount microplate scintillation and luminescence counter
- Tri-Carb liquid scintillation analyzer
- Brandel 48-and 96-sample harvesters
- Storm 860 phosphorimager
- Tecan Ultra plate reader
- MicroFlo Select automated dispenser

Working Closely with Our Clients

RTI's technical, research, and development services meet the highest standards of professional performance to satisfy the unique requirements of our clients. We work closely with our clients to identify their requirements and clarify their expectations, including cost and time constraints.

RTI extends its excellence in research and technical services to its business systems and processes, making it easy for clients, subcontractors, and vendors to partner with us. We have the contractual, legal, and business structures to serve any client with projects of all sizes. RTI is a 501(c)(3) nonprofit corporation.

More Information

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RTI International is one of the world's leading research institutes, dedicated to improving the human condition by turning knowledge into practice. Our staff of more than 2,800 provides research and technical services to governments and businesses in more than 40 countries in the areas of health and pharmaceuticals, education and training, surveys and statistics, advanced technology, international development, economic and social policy, energy and the environment, and laboratory testing and chemical analysis. For more information, visit www.rti.org.

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